

METHOD FOR CONVERTING NATURAL GAS TO OLEFINS

ABSTRACT OF THE DISCLOSURE

[0032] A process for converting natural gas to an olefin includes heating the gas to a selected range of temperature to convert a fraction of the gas stream to reactive hydrocarbons, primarily ethylene or acetylene, and reacting with hydrogen in the presence of a catalyst to produce the olefin, usually ethylene. A portion of the incoming natural gas may be used to heat the remainder of the natural gas to the selected range of temperature. Hydrogen resulting from the reactions may be used to make electricity in a fuel cell. Alternatively, hydrogen may be burned to heat the natural gas to the selected range of temperature.